#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-022254

Address: 333 Burma Road **Date Inspected:** 28-Mar-2011

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes An Qing Xiang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG

#### **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG 13BW (NWIT # 08652)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3014B-165, 170, 174, 178, 182 SEG3014B-087

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 14W:

Repair welding of weld joint no: SEG3020AJ-417 [Floor Beam (FB) 3325A to I-rib stiffener RS3515X on Bottom

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Panel (BP) 3090A, Complete Joint Penetration (CJP) weld at panel point (PP) 127]. The welder is identified as 067520 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair-1. Repair welding was done as per Welding Repair Report (WRR): B-WR 20441 Rev-0.

The FCAW process on weld joint no: SEG3020U-590 [Anchor Plate (AP) 3032A to Side Panel (SP) 3131A, CJP weld at PP126]. The welder is identified as 045175 and was observed welding in 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020BB-002 [Top anchorage plate (AP) 3013A to Vertical Shear Plate sub-assembly SA3442A, CJP weld in between panel point PP125 to PP126]. The welder is identified as 067765 and was observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020BB-029 [Top anchorage plate (AP) 3014A to Vertical Shear Plate sub-assembly SA3446A, CJP weld in between panel point PP125 to PP126]. The welders are identified as 067904 and 67572 and were observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020BB-047 [Top anchorage plate (AP) 3015A to Vertical Shear Plate sub-assembly SA3448A, CJP weld in between panel point PP125 to PP126]. The welders are identified as 069841 and 66261 and were observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AQ-025 [Top anchorage plate PL3519A to Side Plate (SP) 3144B, CJP weld in between panel point PP125 to PP127]. The welder is identified as 045246 and was observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U5b-FCM-1.

The SMAW process on weld joint no: SEG3020L-018 [Top anchorage Plate (AP) 3015A to Floor Beam (FB) 3325A, Fillet weld at PP127]. The welder is identified as 068969 and was observed welding in 4F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2114-FCM-1.

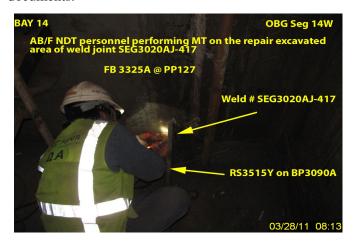
During random in process inspection this QA inspector observed that AB/F NDT personnel Mr. Lin Ming was performing Magnetic Particle Testing (MT) on the repair excavated area of the weld joint SEG3020AJ-417 Joining I-rib stiffener RS3515Y on Bottom Plate (BP) 3090A to Floor Beam (FB) 3325A at Panel Point (PP) 127. Attached photograph provide additional details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

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documents.



## **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang: 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer